

nih record



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'Bread and Butter of NIH'

Annual Research Festival Celebrates Silver Jubilee

By Carla Garnett

Smartphones. The World Wide Web. PubMed. NHGRI. The Children's Inn. For just a brief time at the opening plenary session on Oct. 24, NIH's Research Festival marked its quarter century by remembering things the world didn't have 25 years ago, when the annual science celebration was born.

"The program has grown considerably since our first Research Festival in 1986," acknowledged NIH deputy director for intramural research Dr. Michael Gottesman. "Just going by the numbers, this is a really impressive week."

In addition to the 6 presentations on opening morning, there were 4 concurrent symposia featuring 20 topics and 120 talks, and 4 poster sessions with more than 400 posters. A 2-day scientific equipment show ended the 5-day event.



NIH deputy director for intramural research Dr. Michael Gottesman talks about some of the tech advances at this year's Research Festival, including the use of a QR code (shown above at top right corner) on promotional material.

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NIH director Dr. Francis Collins at SMRB meeting

Will Also Review SBIR/STTR NIH Moves Forward on Main SMRB Recommendations

By Rich McManus

While a challenging budget outlook for NIH continues to cloud the horizon, members of the Scientific Management Review Board (SMRB) on Oct. 26 learned that progress is being made on the two most substantial recommendations it has yet made to NIH director Dr. Francis Collins: that NIH create a new

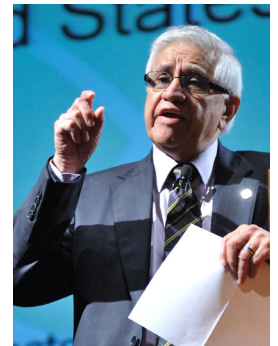
Márquez Calls for Diverse Scientific Workforce

By Erin Fults

In honor of Hispanic Heritage Month, NIH welcomed one of its recently retired employees, Dr. Ernest D. Márquez, to speak about his experiences

and the importance of diversity in the scientific workforce. Opening with a hearty "¡Buenos días!" he stood before an audience that included NIH principal deputy director Dr. Lawrence Tabak, a group of students from Wheaton High School and a diverse audience.

Márquez, president of the board of directors of the Society for Advancement of Chicanos and Native Americans in Science (SACNAS), grew up in a poor, immigrant family. He said his early experience gave him built-in role models and taught him to be inventive and entrepreneurial. He also emphasized the



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The NIH Record is recyclable as office white paper.

SEE SMRB, PAGE 6



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briefs

DDM Seminars Begin Sixth Year

The Deputy Director for Management (DDM) Seminar Series is set to offer another round of presentations on leadership and management, beginning in December.

The sixth annual series will host speakers known for delivering meaningful insights into workplace concepts, challenges and solutions. The seminars offer employees an opportunity to advance their knowledge of best practices in a variety of leadership and management issues.

The first seminar will feature Harvey Coleman on Dec. 15 from 11 a.m. to 12:30 p.m. in Masur Auditorium, Bldg. 10. The series continues into the new year with three more seminars, featuring Michael Roberto on Feb. 16, Deborah Tannen on Apr. 19, and Daniel Pink on June 14. These presentations will focus on culture differences in ways of communicating, managing and valuing diversity, strategic decision-making and human motivation.

Presentations will be available at <http://videocast.nih.gov/> for those who cannot attend or when Masur Auditorium reaches capacity.

Sign language interpreters will be provided. Individuals who need reasonable accommodation to attend should call (301) 496-6211 or the Federal Relay Service at 1-800-877-8339. For more information about the series and to view previous DDM Seminar videocasts, visit www.ddmseries.od.nih.gov/.

APAO Solicits Award Nominations

The NIH Asian and Pacific Islander American Organization (APAO) invites your suggestions for nominees to receive its 2011 Scientific Achievement Award. This annual tradition aims to recognize an Asian/Pacific Islander American researcher/scientist who has realized significant accomplishments in biomedical research. A review committee will evaluate the nominations. Send the name of your nominee along with a brief statement of support to Prahlad Mathur, APAO president, at mathurp@od.nih.gov. Nominations must be received by Nov. 22 for consideration. The awardee will be honored at the APAO holiday awards luncheon to be held Dec. 12 in Wilson Hall, Bldg. 1.

NIH IntraMall Harvest Showcase, Nov. 16-17

The 2011 IntraMall Harvest Supplier Showcase will be held in the South Lobby of Bldg. 10 on both Wednesday, Nov. 16 and Thursday, Nov. 17 from 9:30 a.m. to 2 p.m. The event is hosted by the IntraMall electronic purchasing site designed exclusively for NIH to simplify purchasing.

Since opening in June 1998, the IntraMall has become a leading NIH web site for using government purchase cards to locate, buy and track purchases from over 300 of its most frequently used suppliers, offering over 11 million lab, office and computer items. Come learn how continuing to purchase through the IntraMall can save your institute money and ease your workload.

Register for the event and a free lunch at www.intramalls.com/showcase. If you require reasonable accommodation to participate, call 1-888-644-6255.

Enter the NIH LAB Challenge

Show your peers and others in the field of health and life science that you are up to The NIH Les-

sions About Bioscience (LAB) Challenge (<http://lab.challenge.gov/>). Science enthusiasts—including NIH scientists, clinicians, postdoctoral and IRTA fellows, SEPA awardees—are asked to send their best hands-on experiments. The experiments should be original, inexpensive, related to health and life science and accessible for use in a K-12 classroom.

Winners will be announced Mar. 1, 2012. Winning experiments will be featured online and published in an NIH collection of best hands-on activities. Each winner will receive an exclusive electronic badge to display online. For more information, go to <http://science.education.nih.gov/NIHLABChallenge.nsf> or contact Carla Easter (easterc@mail.nih.gov) or Cindy Allen (allency@od.nih.gov).

Send your submission today—deadline is Dec. 1—and help meet the federal challenge to enhance science education nationwide.



Registration Open for Exposome Workshop

Registration is under way for a workshop on Emerging Technologies for Measuring Individual Exposomes Dec. 8-9 in Washington, D.C. The workshop is the latest in the National Academy of Sciences ongoing series, organized by the standing committee on use of emerging science for environmental health decisions, sponsored by NIEHS.

The event is free and open to the public, but registration is required for those planning to attend. Instructions on how to access the webcast will be available approximately 1 month before the workshop.

The workshop will look at emerging technologies that can be used to gather individual exposure information based on external and internal measurements. Presentations and discussions will explore which of the technologies are ready now and which are still emerging. For information, visit <http://nas-sites.org/emergingscience/workshops/individual-exposomes/>.

Juvenile Arthritis Patients Perform Hands-On Experiments with NIAMS Researchers

By Gerda Gallop-Goodman

Armed with test tubes, strawberries and cheek swabs, about 30 juvenile arthritis (JA) patients and family members saw what DNA looks like up close when they conducted hands-on experiments alongside NIAMS researchers during a recent visit to the NIH campus.

To offer insight into NIAMS research on rheumatic and musculoskeletal diseases, Clinical Center meeting rooms were transformed into miniature labs where the group conducted scientific experiments and met researchers who discussed their work. The patients and families came from around the country to attend the Arthritis Foundation's Juvenile Arthritis National Conference, an educational event focused on health, wellness and fun for children affected by arthritis, lupus, myositis, ankylosing spondylitis and other rheumatic diseases.

The visit is one of several recent tours hosted by NIAMS to showcase NIH and educate the public about the importance of research here. The group spent the morning hearing from NIAMS's senior leadership, including rheumatologists Dr. John O'Shea, scientific director, and Dr. James Witter, a health scientist administrator, to learn about ongoing pediatric rheumatology research and discoveries. Witter highlighted the importance of basic research during his presentation, saying, "Biologics elucidate pathways in rheumatic arthritis. And, through genetics research, we can figure out which populations are at higher risk for lupus and unravel what's going on in diseases like these."

Bernard Murphy, chair of the Juvenile Arthritis Alliance Leadership Group and parent of a daughter with JA, acknowledged the work of NIAMS and its scientists. "You're helping to unravel the mysteries of this disease. What you're doing—this is our hope. We continue to hammer home that research dollars are a good value...Thank you for 25 years of trying to beat this disease."

A 12-year-old patient also took the opportunity to present a plaque to the staff of NIAMS expressing the group's gratitude for the researchers' work to "make everybody's life better." She shared her emotional experience living with JA, stating that even though she takes two shots and 14 pills a day, she still manages to play softball, baseball, ride her bike and play with her dog.

The patients spent their remaining time on campus meeting with scientists and participating in lab exercises. "With the hands-on activities, they were really having fun and began to have an appreciation for how research works," said O'Shea.



Juvenile arthritis patients and their families recently visited NIAMS to learn about cutting-edge scientific discoveries.

Several patients and family members learned about chromosomes and genes and saw what DNA looks like with O'Shea and NIAMS rheumatologist Dr. Raphaela Goldbach-Mansky, along with their lab assistants. With test tubes in hand, they extracted DNA from their own cheek cells or from strawberries. They were amazed to see the stringy, white DNA suddenly appear.

"I liked doing the experiments because it's something I would never do in biology class," said one patient. "Here, they explained it in a fun and engaging way."

Another group, led by Dr. Robert Colbert, chief, NIAMS Pediatric Translational Research Branch, and his lab assistants, mixed calcium and phosphate solutions to learn how these minerals make bones strong; used chicken bones to feel the difference between normal bones and ones that need to be treated; peered under a microscope to see bones from a mouse's head and tail; and viewed x-rays of humans and obese rats to see the difference between healthy and diseased bones.

"This visit opened my eyes to something different," said one parent. "As advocates, we need to understand the roots of research. Otherwise you don't know what you're fighting for."

Many parents wanted to learn about getting more involved in research and enrolling their children in clinical trials. After touring the Clinical Center's pediatric rheumatology clinic where such trials are conducted, both parents and children alike were encouraged.

"This visit is heartening," said one parent. "It gives you courage and hope. Meeting with the researchers is a more positive and human connection. These are real people and they care about us." 🗣️

NIH Hosts Telework Festival, Nov. 22 at Natcher

The NIH Telework Festival will be held on Tuesday, Nov. 22 from 9 a.m. to 1 p.m. in the Natcher Conference Center. Learn how teleworking can be part of the solution to help NIH support employee work/life balance, improve its ability to retain high-quality staff, maintain performance during emergency situations without reducing productivity, decrease traffic congestion caused by BRAC and meet HHS and NIH sustainability goals.

Hear first-hand from senior scientific and business leaders on how they have integrated telework into their operations. Participate in interactive telework technology demonstrations by CIT, NIH and NIMH. Show your creativity and enter the telework poster contest. Salute the NIH winners of the HHS Green Champion awards. Visit exhibitors from OHR, ORS/ORF and other telework-related organizations. For more information and to register visit <http://meetings.nigms.nih.gov/meetings/TeleworkFestival/> or view via videocast at <http://videocast.nih.gov>. Onsite registration is available.



MÁRQUEZ

CONTINUED FROM PAGE 1

Above, from l:

Márquez, an NIH alumnus, greets friends who came to hear him speak at the event. He says NIH can help make connections between scientists and underserved communities, as well as encourage principal investigator, postdoc and training fellow participation at national conferences and regional meetings.

Below:

Students from Wheaton High School were special guests at the observance.

PHOTOS: ERNIE BRANSON

importance of mentoring. "As I look back on my career, mentoring created the turning points in my life," he said.

SACNAS puts a strong focus on mentorship, and with a membership of more than 30,000 students and professionals from institutions across the country and Puerto Rico, it offers ample opportunities to foster mentoring relationships. The SACNAS chapter at NIH, some of whose members were in the audience, provides support for mentoring and personal networking and "will enhance efforts to attract, recruit and retain under-represented minority (URM) scientists," said Márquez.

Altogether, minorities made up 28.5 percent of the U.S. population in 2007. The total of URM in the science and engineering workforce, however, was only 9.1 percent of total doctorates, 4.7 percent of whom were Hispanics. "Should we be concerned that only 9.1 percent of college-educated URM Americans are in science, technology, engineering and mathemat-

ics [STEM]? Yes! Because this suggests that the proportion of URM would need to triple to match their share of the overall U.S. population," said Márquez, quoting from a recent National Academies report.

He stressed that diversity in scientific research is critical because it brings different perspectives and approaches to solving complex problems; contributes to the health of the nation by expanding the STEM talent pool and improving the nation's global research; and offers insights on how to meet the needs of underserved communities and thereby resolve health disparities.

Displaying a graph of URM involvement in STEM professions, with Hispanics well below the Caucasian average, Márquez remained optimistic. "I could show you this graph and say, 'Oh, what horrible data.' But instead I'd like to say, 'Look at the wonderful opportunity coming toward us.' Yes, this line is down at the bottom, but somewhere around 2004 it started taking an upward tick. Something's working, so let's seize that and continue to make it better," he said.

While SACNAS's relationship with NIH is still in the early stages, Márquez believes there is a lot NIH will be able to do, such as helping make connections between scientists and underserved communities, as well as encouraging principal investigator, postdoc and training fellow participation at national conferences and regional meetings.

"The bottom line here is that there's lots of room for improvement. How we achieve that critical improvement is going to depend on what we do in the next 5 to 10 years," said Márquez. "The historical underrepresentation of minority scientists has to improve dramatically. It just has to!" 🗨️





MIT's Kaiser To Lead NIGMS

Dr. Chris A. Kaiser has been selected as director of the National Institute of General Medical Sciences. He is currently professor and head of the department of biology at Massachusetts

Institute of Technology. Kaiser expects to begin his duties as NIGMS director in spring 2012, taking the reins from Dr. Judith Greenberg, who became acting director in July 2011 after the departure of Dr. Jeremy Berg.

Kaiser is not new to the NIH community—he has been an NIGMS grantee since 1992 and has served on several NIH review committees. A leading cell biologist, he uses yeast to study the basic mechanisms of protein folding and intracellular transport, molecular processes essential to normal cell function. He joined the MIT faculty in 1991, became a full professor in 2002 and has chaired the biology department since 2004.

As NIGMS director, he will oversee a \$2 billion budget, which primarily funds more than 4,500 research grants (about 10 percent of those funded by NIH as a whole) as well as a substantial amount of research training and programs designed to increase the diversity of the biomedical and behavioral research workforce. He also plans to continue his scientific studies in a lab at the National Institute of Child Health and Human Development.

"In taking this position," said Kaiser, "I feel a compelling call to duty for national service and to be an advocate for the basic research enterprise."

Microbiome Congress To Be Held in Paris

The International Human Microbiome Congress will be held Mar. 19-21, 2012, in Paris at the Palais Brongnart. Topics to be discussed include an opening session on lessons learned from early studies in the human microbiome, microbiome composition of the healthy human, clinical and functional studies of the human microbiome and a panel discussion on the future of microbiome research. Poster sessions will continue throughout the 3-day congress. Visit www.metahit.eu/index.php?id=paris-2012 for more information.



On hand at the Tougaloo College visit were (seated, from l) Sylvia Robinson, Wynette Williams, Dr. Susan Shurin, acting director, NHLBI; Dr. Helena Mishoe, director, Office of Research Training and Minority Health (ORTMH); Kmeone Kingdom; Dr. Nimr Fahmy, Tougaloo College math professor. Standing are (from l) Dr. Nara Gavini, ORTMH; Taylor Streeter; Ivy Alexander; Amanda Osborne; Melvin Smith; Marcus Garcia, ORTMH-HACU intern; Iva Ingram; Chantel Willis; Morgan Jones, health communications specialist, NHLBI Office of Communications; Beverly Kelly-Greenfield; Mousetta Spann, Dr. Chitra Krishnamurti, deputy director, ORTMH; Janita Coen, ORTMH.

Tougaloo College Students Visit NIH

NIH recently welcomed students from Tougaloo College for a 2-day tour of the campus as part of a program sponsored by NHLBI's Jackson Heart Study (JHS). The study, based in Jackson, Miss., is the largest single-site investigation of causes of cardiovascular diseases in the African-American population. The Jackson Scholars at Tougaloo College participate in analysis of data at the JHS, which is run by investigators at Jackson State University and the University of Mississippi Medical Center.

NHLBI acting director Dr. Susan Shurin met with the students, who are studying to be epidemiologists and public health professionals. She encouraged them to pursue their careers in science and emphasized the importance of their participation in the JHS. "We are delighted to have you here at the NIH," she said. "You are our future. This is an exciting time to engage in science. We would like to help you find opportunities which are fascinating to you, and where you can make a difference."

The students' visit, arranged by NHLBI's Office of Research Training and Minority Health, included tours of the Clinical Center, NHLBI laboratories and the National Library of Medicine, a panel discussion with NHLBI interns and presentations of career and mentoring opportunities at NIH.

Online Training Accessible on Cancer.gov

The National Cancer Institute has organized its education and training materials for health professionals into one convenient location. The resources found on the Education and Training for Health Professionals web page (www.cancer.gov/cancertopics/health-professional-training-tools) are designed to help meet the cancer educational needs of health care providers, public health program planners, researchers and cancer registrars. Through ready access to a variety of targeted trainings, these audiences will increase their capacity to deliver state-of-the-art cancer care and up-to-date cancer education to the public.

The training covers a range of topics including clinical trials, patient care, evidence-based cancer control program planning, translational research, cancer registries and their operation. Courses are available in a number of formats, including online self study, CD/DVD, downloadable material, webinars, podcasts and animated tutorials.



SMRB

CONTINUED FROM PAGE 1

From l:

Collins confers with Dr. Kathy Hudson, NIH deputy director for science, outreach and policy, at the SMRB meeting.

In the foreground, Barbara McGarey (l) of the Office of General Counsel talks with Theodore Roumel, a management consultant formerly with NIH's Office of Technology Transfer, while at rear, Dr. Michael Gottesman (l), NIH deputy director for intramural research, converses with NIH alumnus Dr. Solomon Snyder.

NIA director Dr. Richard Hodes (r) makes a point while Collins and Dr. Gail Cassell of the SMRB listen.

PHOTOS: ERNIE BRANSON

National Center for Advancing Translational Sciences (NCATS) and that a single institute take the place of NIAAA and NIDA.

"We are all very energized by the potential of NCATS," said Collins.

However, he offered a "reality check" on the NIH budget, which has essentially flattened following the doubling that occurred during 1998-2003 (excepting the one-time American Recovery and Reinvestment Act increase of \$10.2 billion in 2009). "Our buying power is essentially the same as it was 10 years ago, even as scientific opportunities have expanded," he said.

The traditional NIH grant success rate of between 30-35 percent "has become far less healthy in the past 7 or 8 years," Collins continued. "For fiscal year 2011, it seems it will be less than 20 percent for the first time in history," he said. Rather than 1 in 3 applications being approved for funding, the new ratio will be closer to 1 in 6, he explained.

Collins noted that much depends on the deliberations of the congressional super-committee, which is charged with trimming trillions of dollars from the U.S. budget. Should the super-committee's recommendations fail to win bipartisan approval, a mandatory process of budget "sequestration" would take place, the consequences of which, for NIH, "would be truly draconian," Collins said. "These are not just stressful times, but potentially disastrous times...it's hard to know what trajectory we are on."

Meantime, plans to stand up NCATS are proceeding, according to Dr. Kathy Hudson, NIH deputy director for science, outreach and policy. The new center is included in Senate report language for FY 2012, at a mark of \$582.4 million for NCATS, plus \$20 million for its component Cures Acceleration Network. The House has not yet marked up a bill through its subcommittee, she reported.

"While we wait," she said, NIH is currently solic-

iting applications for an NCATS director and designing pilot programs such as an NIH-DARPA-FDA collaboration to create a "tissue on a chip" to screen for safe and effective drugs, and "identifying a role NIH could play as a matchmaker for rescuing and repurposing compounds," which applies the "crowd-sourcing" concept to potential drugs.

"We are eagerly awaiting the day that we can cut the ribbon" on the new center, Hudson said. She noted that President Obama "strongly supports the mission of the new center" and hopes he may even attend an eventual NCATS dedication ceremony.

NIH principal deputy director Dr. Lawrence Tabak reported that NIH has shifted back by 1 year the implementation plan for merging NIAAA and NIDA into what is at least temporarily known as the National Institute of Substance Use and Addiction Disorders.

"We are in the midst of completing a very detailed portfolio analysis among all the potentially relevant institutes and centers," he said, including "a significant amount of intramural research."

He continued, "A scientific strategic plan is now launched...It is not a reprise of 'should we have a new institute or not?'" Rather, it is identifying gaps in knowledge and new opportunities that NISUAD might explore and is being conducted by NIH and relevant stakeholders, he explained.

"The group has met internally," Tabak said, "but will begin to engage focus groups and town halls across the country. Our goal is to gain maximum input on scientific opportunity."

A year from now, in fall 2012, NIH expects to release its portfolio integration plan and scientific strategic plan, both of which include public comment periods. NISUAD might then debut in October 2013 as part of the FY 2014 budget.

Tabak said the year's delay in standing up the

new institute is due to “the complexity of the portfolios, and to assure sufficient time for public comment and, particularly, to allow for review of scientific opportunities.”

Three stakeholders commenting on the proposed merger called for a consensus conference that would explore funding issues and more sharply define the range of “excessive behaviors” that could be studied, including gambling, obesity and smoking.

One other SMRB recommendation—that the Clinical Center be funded as a line item in the Office of the Director budget, rather than via a management fund contributed to by all user ICs—also hit a bump in the road. NIAMS director Dr. Stephen Katz, who chairs the CC governance board, said the hospital would continue to be funded internally in FY 2012 and 2013 because implementation of the SMRB recommendation “is more legally complex than anticipated.”

The CC will, however, proceed with plans to broaden its Bench-to-Bedside Program to include extramural investigators, provided that outside teams include an intramural collaborator.

Collins concluded the meeting by giving the SMRB a new charge: recommend ways to optimize and make more effective the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs, both of which are managed by the Office of Extramural Research and depend on IC taps for their funding.

The SBIR, extant since 1982, is funded through a 2.5 percent set-aside for each user IC, or \$609 million in 2011; the STTR, founded in 1992, gets a 0.3 percent set-aside, or \$73 million in 2011.

“Some institutes consider [these programs] an incredible asset, while others ask, ‘What is this?’ Some institutes want to spend more [than what is allotted] and some, frankly, don’t want to spend any,” Collins said. “I want to look at the flexibilities we have and perhaps find some more effective approaches. These programs can be fine-tuned to capture the very best and most promising science.”

The SMRB accepted the charge and NIH alumnus Dr. Solomon Snyder, now at Johns Hopkins University, will chair the SBIR/STTR working group.

SMRB’s next scheduled meeting is Dec. 21, by which time Collins said the budget picture should be clearer.



Snyder (l), who accepted leadership of a SMRB working group on SBIR/STTR operations, talks with Dr. Arthur Rubinstein, dean of the University of Pennsylvania School of Medicine. Rubinstein thinks his peers in academic medicine have misjudged the seriousness of the current budget situation.

research portfolio (“You should never let a crisis go to waste,” quipped Collins, paraphrasing Chicago Mayor Rahm Emanuel) and change how NIH resources are managed, including potentially limiting the number of R01 grants individual investigators may hold.

Collins said he welcomes any useful suggestions the scientific community may have and offered an email address for ideas: NIHResourceManagement@nih.gov.

Two SMRB members, however, added their own assessments of the current budget climate.

“This is my third downturn,” said Dr. William Brody, former president of Johns Hopkins University, alumnus of the advisory committee to the NIH director and currently president of the Salk Institute for Biological Studies. “This one feels worse than the others.”

Brody says the extramural world “is in denial.” Many institutions continue to build up their medical campuses, as if it were true that you could “build it and they will come.”

He thinks the current slump in scientific funding will persist indefinitely, noting, “I think the system has to wash out some people.”

During a recent limousine ride in New York City, he asked the driver how long he’d been a chauffeur. “He said, ‘Four months.’ Before that, he had been a pharmaceutical chemist for 31 years.”

Also commenting was Dr. Arthur Rubinstein, dean of the University of Pennsylvania School of Medicine. “There’s this unreal feeling that ‘it’s not going to affect my institution.’ I keep saying that there are going to be millions and millions less for university research. But they laugh at me when I preach, at my institution.”

Collins said that whatever austerities may be introduced, NIH is “not going to issue a mandate and say ‘Live with it.’ It will be a community-generated response.”

He mused about potential cost-savings if, for example, effort-reporting audits were no longer required, or if fewer IRBs needed to approve individual studies. “There may be some tasks we could unload, or reorganize some administrative burdens,” he said.

Observed SMRB chairman Norman Augustine, retired chairman and CEO of Lockheed Martin Corp., who has witnessed large layoffs at his company, “People can stand change, but they can’t stand uncertainty...You don’t cut the cat’s tail off an inch at a time.”

Budget Worries Occupy Advisors

At each gathering of the Scientific Management Review Board, NIH director Dr. Francis Collins delivers a “state of the NIH” address, which updates the SMRB on agency activities.

His Oct. 26 presentation included four avenues that NIH is either already pursuing or planning to keep budget pain at a minimum: make the case for NIH, trim spending across the board, evaluate and perhaps rearrange the



RESEARCH FESTIVAL

CONTINUED FROM PAGE 1

Above, from l:

Festival poster sessions were held on two floors of the Natcher Conference Center. Dr. Percy Pui Sai Tumbale (r), a postdoctoral fellow in NIEHS's Laboratory of Structural Biology, traveled from North Carolina to discuss her poster.

Dr. E. Emily Joo (r) of NIDCR's Laboratory of Cell and Developmental Biology chats about her work. Joo is a 2011 winner of a Fellows Award for Research Excellence.

One of the Research Festival's cochairs, Dr. Robert Wiltrout, director of NCI's Center for Cancer Research, introduces a speaker at the opening plenary session, which was held in Masur Auditorium.

PHOTOS: BILL BRANSON

Now and Then

"This is the time we set aside every year to marvel at our own intramural research accomplishments, to strut our feathers, learn more about the breadth of research and resources here and renew our confidence in the fact that the NIH Intramural Research Program is the best research program in the world," Gottesman said.

He also noted that this year's festival was more technologically savvy than ever. The event's web site was completely revamped. For the first time, program schedules and other details were accessible via QR, or quick response, code and viewable on smartphones and other mobile devices. "We're hoping to set a standard for scientific meetings here," he said.

At the first Research Festival—called "NIH Intramural Research Day" and held from 8:30 a.m. to 8 p.m. all on one day—2 symposia with 8 talks, 20 workshops and 95 posters were capped off with an evening picnic and jazz music.

"The Research Festival has since become critically important to our scientific staff—particularly early and mid-career scientists—in getting recognition for their work, to generate discussions between labs, between buildings and between institutes," Gottesman concluded. "Many of us have little sense of the common ground we

share and bringing everyone together is an opportunity to share that common ground. I'd like to thank [former NIDR scientific director Dr.] Abner [Notkins] for starting this fine tradition. I would like to thank all of you—the bread and butter of NIH research—who keep this tradition alive."

'Pursue Disruptive Innovation'

NIH director Dr. Francis Collins, in a recorded video, also noted how far the science world has come in recent years and lamented having to miss the "spirit of excitement" surrounding a festival "packed with the best that NIH has to offer."

He said dramatic advances in technology have led to better understanding of human biology and the mechanisms of disease, "but clinical advances have been frustratingly slow to arrive." In fact, he noted, "medical therapies currently exist for just 250 of those approximately 4,000 conditions with well-defined molecular causes.

"Serious economic challenges currently confronting the private sector may make it hard to capitalize on new translational opportunities," he acknowledged. "That's why one of my leading priorities as NIH director is to pursue disruptive innovation in the translational sciences. I know



At left, NIDDK's Minoo Shaloury-Elizah (c) and NINDS's Dr. Jean Tjong-Koehler (r), who are members of the NIH Environmental Management System's sustainable laboratory practices working group, share information on the Labs Go Greener effort with Ningna Huang of NIAID; at right, Dr. Jonathan Lam (r) of NHLBI discusses his work with Rajat Singh of NINDS.



A display on the Cancer Biomedical Informatics Grid was one of several special exhibits on resources for intramural research.

many of you share that dream and see the NIH intramural program as a particularly appropriate place for such high-risk, high-reward research.”

Describing the proposed National Center for Accelerating Translational Sciences, Collins said, “The time is right to subject translational research to the same kind of bold innovation that has characterized other branches of biomedical science.”

He called NCATS a “new entity to shape and sharpen this new vision” that will involve both extramural and intramural components and will “serve as a catalytic hub for new ideas about how to improve translation.”

IRP ‘Pretty Impressive’

Touting the overall excellence of NIH’s intramural science community, Collins shared a recent experience he had while attending the Lasker Awards ceremony.

He recalled that during presentation of the Lasker-Bloomberg Award for Public Service to the Clinical Center, Institute of Medicine president Dr. Harvey Fineberg asked the audience of distinguished medical research leaders to raise their hands if they’d ever been part of NIH’s IRP.

Collins said he looked around, taking an unofficial survey. How many of the group had hands in the air?

“By my count, about one third—pretty impressive,” he concluded.

Collins also congratulated the three NIH intramural scientists who recently received Presidential Early Career Award for Scientists and Engineers honors from President Obama, and addressed all of the young researchers at NIH.

“You truly are the future of NIH science,” he concluded. “Let’s keep up the good work. Enjoy this year’s Research Festival and then go on to show the world that even in tough times, NIH intramural is more committed than ever to pursuing the very best science for the benefit of all those out there whose hopes are pinned on the work that we do here.”

Closing the Gap

LaVeist Addresses Race Disparities in Health Care

By Erin Fults

When Dr. Thomas LaVeist gives a presentation on health disparities, he shows a slide with a graph of age-adjusted mortalities by race. The information is from 2003, which may seem a bit outdated coming from the director of the Hopkins Center for Health Disparities Solutions at Johns Hopkins Bloomberg School of Public Health.

“I used to update this slide every year, but then I just gave up,” said LaVeist, “because the pattern is the same every year. The differentials are exactly the same.”

The unchanging data reflect the disturbing persistence of serious health inequalities in the United States. LaVeist presented as part of NIH’s Mind the Gap seminar series and sought to clarify the real reasons behind health inequality.

In 2006, African Americans had a crude death rate (total deaths per 100,000 population for a specified period; rate represents the average chance of dying during a specified period for persons in the entire population) of 1,330.2 while Asian Americans had a crude death rate of 414.7, which is the lowest in America. If African Americans and Asian Americans had the same death rate, there would have been 170,831 fewer African-American deaths. “In the time it took me to do that math, there was at least one excess death in America of an African American,” said LaVeist.

Excess deaths come at more than just a social justice cost, explained LaVeist. There are also substantial costs to society and the economy that can be calculated through lost productivity, preventable use of health services and premature deaths.

LaVeist noted that many people automatically jump to socioeconomic status (SES) as the reason for health inequalities. This, he says, is incorrect. Rather, it is social and environmental exposures and unhealthy environments that are determining the outcome of people’s health.

In the same country, the same state, even down to the same county, people are experiencing different risk environments; these environments are determining residents’ health outcomes. LaVeist’s current research dissects disparities down to small geographic areas, looking at racially integrated communities where the environment and SES of individuals is similar. This allows the research team to examine if disparities persist when black and white Americans live under similar conditions.

Oftentimes, research data are not properly adjusted to account for varying levels of social stratification. For example, adjusting for educational attainment does not account for race differences in quality of education or differential opportunities that accrue to graduates from different schools. “These are the underlying problems in much of the research we’re doing. We often don’t account for the fact that there are systematic inequalities in the variables we rely on to equalize the samples,” said LaVeist.

Another popular response to the reason for health inequality is genetic and biological differences between races. “The folly of race is that we think because we can look at skin color we can understand what we need to know about the individual’s genome in order to make decisions for what’s happening underneath their skin,” said LaVeist. “The illusion of race can confuse the best of us.”

Understanding the reason for race disparities in health is the first step in going forward and closing this significant and costly gap, he said.



Math Disability Linked to Problem Relating Quantities to Numerals

Children who start elementary school with difficulty associating small exact quantities of items with the printed numerals that represent those quantities are more likely to develop a math-related learning disability than are their peers, according to a study funded by NICHD. Study findings appeared online in the Sept. 12 *Journal of Educational Psychology*.

The children in the study who appeared to have difficulty grasping the fundamental concept of exact numerical quantities—that the printed numeral 3, for example, represents three dots on a page—went on to be diagnosed with math learning disability by fifth grade.

Other early factors correlated with a math learning disability were difficulty recalling answers to single-digit addition problems, distractibility in class and difficulty understanding that more complex math problems can be broken down into smaller problems that can be solved individually.

Although the math learning disabled children did make limited progress in subsequent grades, by fifth grade they had not caught up to their typically achieving peers in the ability to recall number facts or in their ease of adding sets of dots and numerals together.

Benefits, Limits of Therapy Shown for Rare Inflammatory Syndrome

A study shows that the medication etanercept reduces the frequency and severity of symptoms of TNF receptor-associated periodic syndrome (TRAPS), a rare inherited condition characterized by recurrent fevers, abdominal pain and skin rashes. The study, published in *Arthritis & Rheumatism*, also points out the need for the development of additional therapies to more thoroughly ease symptoms and prevent long-term complications of the disease. The study was released by researchers at NIAMS.

TRAPS is associated with mutations in the gene coding for tumor necrosis factor receptor 1, a critical molecule in receiving inflammatory signals in the body's immune system. Etanercept, trade name Enbrel, is one of a class of drugs that block tumor necrosis factor, a protein implicated in the harmful inflammation in

TRAPS, as well as a number of common rheumatic diseases, including rheumatoid arthritis. While the drug has been used in the treatment of TRAPS for about 10 years, this is the first formal study to look at its effectiveness long-term, said NIAMS acting clinical director Dr. Richard Siegel, one of the senior authors.

Gene Variant Increases Risk of Kidney Disease in African Americans

African Americans with two copies of the APOL1 gene have about a 4 percent lifetime risk of developing a form of kidney disease, according to scientists at NIH. The finding brings scientists closer to understanding why African Americans are four times more likely to develop kidney failure than whites, according to a report in the Oct. 13 online edition of the *Journal of the American Society of Nephrology*.

Researchers have begun tracing the effects of having two variants of the APOL1 gene, which occurs in about 12 percent of African Americans.

Researchers earlier linked this gene to susceptibility for kidney disease. The researchers studied a common kidney disease called focal segmental glomerulosclerosis, which often progresses to end-stage kidney disease and the need for dialysis or a kidney transplant.

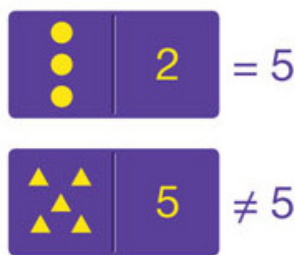
Perinatal Antidepressant Stunts Brain Development in Rats

Rats exposed to an antidepressant just before and after birth showed substantial brain abnormalities and behaviors, in a study funded by NIMH.

After receiving citalopram, a serotonin-selective reuptake inhibitor, during this critical period, long-distance connections between the two hemispheres of the brain showed stunted growth and degeneration. The animals also became excessively fearful when faced with new situations and failed to play normally with peers—behaviors reminiscent of novelty avoidance and social impairments seen in autism. The abnormalities were more pronounced in male than female rats, just as autism affects 3-4 times more boys than girls.

“Our findings underscore the importance of balanced serotonin levels—not too high or low—for proper brain maturation,” explained NIMH grantee Dr. Rick Lin of the University of Mississippi Medical Center.

Lin and colleagues reported on their discovery Oct. 24 in the *Proceedings of the National Academy of Sciences*.—compiled by Carla Garnett



In the study, researchers found that children with a math learning disability had difficulty with a test consisting of symbols and numbers.

milestones

Porter Named NICHD Clinical Director

Dr. Forbes D. Porter has been appointed clinical director at the National Institute of Child Health and Human Development.

“Dr. Porter is an accomplished scientist, a model clinician and a skilled administrator,” said NICHD director Dr. Alan Guttmacher. “His leadership and guidance will be strong assets in carrying out the NICHD’s mission and in helping to realize its scientific vision.”

The clinical research program currently includes more than 100 protocols focusing on adult, pediatric and reproductive endocrinology, human genetics, growth and development, national and international health and women’s health.

“I am honored to have been chosen to direct the NICHD’s distinguished clinical research program,” Porter said. “I will do all that I can to assist institute scientists in their quest to improve the public’s health through their research efforts.”

Porter has served as acting clinical director since April 2010. He is currently head of the section on molecular dysmorphology. His work has focused on understanding two rare genetic disorders involving cholesterol, Smith-Lemli-Opitz syndrome and Niemann-Pick disease type C. Smith-Lemli-Opitz syndrome results from a defect in the ability to manufacture cholesterol. Individuals with the condition may have intellectual disability, smaller than normal head size and certain physical malformations. Severe cases may be life-threatening. Niemann-Pick disease type C results from a failure of cells to break down and use cholesterol. The accumulation of cholesterol results in damage to the nervous system, and, eventually, death.

Porter came to NIH in 1993 as a senior staff fellow to investigate homeobox genes—genes that determine when groups of other genes are expressed during embryonic development. In 1996, he established his own laboratory, where he began work on disorders involving cholesterol.

Recently, he became acting head of NICHD’s Program in Developmental Endocrinology and



NIDCD Advisory Council Welcomes Six

The National Deafness and Other Communication Disorders Advisory Council recently added six new members to its roster.

Patricia Kehn is executive director of the Association for Chemoreception Sciences. As vice-president of L&L Management Services, Inc., an association management company based in Minneapolis, she also serves as managing officer for the American Society of Neuroimaging, the American Society of Neurorehabilitation, the American Society of Ophthalmic Plastic and Reconstructive Surgery and the Organization for Human Brain Mapping.

Dr. Paul Manis is a professor and director in the department of otolaryngology/head and neck surgery at the University of North Carolina, Chapel Hill. His primary scientific interest is in the mechanisms of neural information processing in sensory systems.

Dr. Charlotte Mistretta is associate dean for research and Ph.D. training at the University of Michigan’s School of Dentistry. She also serves as program director in oral health sciences and as a professor in the department of biological and materials sciences.

Dr. Tommie Robinson is director of the Scottish Rite Center for Childhood Language Disorders in Washington, D.C., and an associate professor of pediatrics at George Washington University School of Medicine and Health Sciences. He specializes in communication disorders in children, with a focus on children who stutter.

Dr. James Schwob is the George A. Bates professor of histology and chair of anatomy and cellular biology at Tufts University School of Medicine. He has worked with graduate and post-graduate trainees, many of them supported by NIDCD.

Dr. Robert Shannon is director of the division of communication and auditory neuroscience, head of the auditory implant research laboratory and scientific director of the auditory brainstem implant project at the House Research Institute in Los Angeles. He is also a research professor in the biomedical engineering department and adjunct professor of the neurosciences program at the University of Southern California.



Major Receives Densler Award

Christine Major, director of the NIH Office of Human Resources, was recently honored with the Frank H. Densler Award during the International Public Management Association for Human Resources (IPMA-HR) eastern region conference in Glen Falls, N.Y. The award, the organization’s highest, is presented annually to an individual who has made significant contributions to the goals, purposes and objectives of IPMA-HR eastern region and the field of public human resource administration. Major has been a member and leader in IPMA-HR for over a decade. She has served in nearly every leadership role in the region, including president of the Montgomery County chapter and the eastern region, and currently serves at the national level as an executive council member. Major has more than 25 years of experience in the human resource field at NIH.

NIDDK Scientific Director Levin Retires

By Rachel Greenberg

When Dr. Ira Levin, a world leader in vibrational spectroscopy and NIDDK scientific director since 2009, retired from NIH recently, he left a huge mark, both on his field and on NIH. In nearly 48 years at NIH, Levin's career included 235 publications, 135 published meeting abstracts and 20 awards and honors, including the Pittsburgh Spectroscopy Award, the top award in the field.

"For the past 48 years, Ira's work has focused on developing new and innovative spectroscopic methods and their applications to a wide range of problems," said Dr. William Eaton, chief of NIDDK's Laboratory of Chemical Physics. "From his early work initiating the field of infrared imaging, to using both infrared and Raman measurements to characterize the structure of lipid bilayer systems, and to his latest work applying vibrational spectroscopic imaging to medical diagnostics, Ira has been the acknowledged leader and among the most cited spectroscopists of his generation."

Levin's scientific career was matched, if not exceeded, by the strong relationships and accolades that marked his administrative roles at NIDDK. Levin's colleagues described their mentor as the "captain of their ship," saying he will be much missed.

"Ira is the epitome of modest and unpretentious," said NIDDK director Dr. Griffin Rodgers. "When he popped in on scientists and staff he was a colleague and mentor—not the 'scientific director.' I will miss Ira's gracious guidance and insights, his love for science and his support for the people behind the science."

"If NIDDK had an award for 'mensch laureate,' Ira would be the leading candidate for that award," said Dr. James Balow, NIDDK clinical director. Balow will serve as acting scientific director until a new SD is named.

Since the mid-1990s, Levin held several management positions with the NIDDK Division of Intramural Research while continuing to lead the molecular biophysics section of the Laboratory of Chemical Physics until 2009.

"The same talents you hone over the years as a scientist work well for an administrator," said Levin. "I'd listen carefully, go to meetings, hear others' ideas and then flesh out new thoughts."

Balow explained his colleague's administrative success otherwise. "I'm convinced that Ira's mastery of fine spectral signal discrimination formed the underpinnings and created

the model for his success," said Balow. "Ira could detect the key elements resounding from the chorus of requests and competing interests of his constituents in NIDDK. He was a master at separating the wheat from the chaff, the frivolous from the important."

Levin's ability to distribute resources fairly in the face of shrinking budgets earned the respect of his colleagues and supervisors alike.

"In his unswerving dedication and commitment to NIDDK, Ira exhibited a deep understanding of the concept of the common good," said Balow. "His decisions were based on what was good for NIDDK as a whole, and ultimately, the good of the public, which entrusts us with its treasure chest of support."

Reflecting on his career at NIDDK, Levin said he was most proud of his colleagues' passion and intellect, their readiness to exchange ideas and the outstanding ratings NIDDK received from the board of scientific counselors. Of himself, he said, "As administrator, you want to carry on your most creative, innovative and strongest research. Maintain the enthusiasm of the enterprise and do it all by remaining invisible."

Fortunately for NIH and the field of spectroscopy, Levin's influence was anything but invisible.

Clark Named Chief PHS Veterinary Officer

Capt. Terri Clark, who directs NIH's Office of Animal Care and Use, was recently named chief professional officer for the veterinary category by U.S. Surgeon General Regina Benjamin.

As chief veterinary officer, Clark will lead PHS veterinary professional affairs and advise the Office of the Surgeon General and the Department of Health and Human Services on the recruitment, assignment, deployment, retention and career development of corps veterinarians.

She transferred to PHS in July 2000 after spending more than 11 years in the U.S. Army Veterinary Corps and spent a year and a half at NINDS. She moved to OACU in March 2002.

Clark received her B.S. in animal and dairy science in 1982 and her doctorate of veterinary medicine in 1988 from Auburn University.



NIDDK scientific director Dr. Ira Levin (l) is honored by NIDDK director Dr. Griffin Rodgers (at lectern) at a celebration in honor of Levin's retirement from NIH after 48 years of government service.

PHOTO: BILL BRANSON



Neva, Renowned Parasitologist, Dies

Dr. Franklin A. Neva, a noted virologist, parasitologist, clinician and former chief of NIAID's Laboratory of Parasitic Diseases (LPD), died Oct. 16 at age 89.

"Frank Neva was an exceptional scientist and clinician who established a pioneering biomedical research program focused on the interactions between humans and parasites," said NIAID director Dr. Anthony Fauci. "He built the NIAID Laboratory of Parasitic Diseases into a world-class team, hiring and training future leaders in clinical parasitology for more than 30 years. He was widely admired as a person, mentor, clinician and scientist and he will be greatly missed."

Neva earned his M.D. in 1946 from the University of Minnesota Medical School, having enrolled in the Navy's accelerated wartime training program. In 1947, he began his research career, studying typhoid fever and schistosomiasis at a Navy research unit in Cairo, Egypt. He then spent 3 years at Harvard University, where he first described "Boston exanthema disease," an echovirus infection in children characterized by mild fever and widespread rash. After an academic appointment in the lab of Dr. Jonas Salk at the University of Pittsburgh, Neva returned to Harvard to work in the newly created department of tropical public health, where in 1962 he and Dr. Thomas Weller co-discovered the rubella virus, the cause of German measles. An independent group at Walter Reed Army Institute for Research also isolated the virus around the same time.

Neva was recruited to NIAID in 1969 to become chief of the LPD. He helped unite research sections scattered from Hawaii to Georgia to Bethesda and from the beginning emphasized research on the biology of parasites as well as on the human immune responses to parasitic infections. In 1971, he hired Dr. Louis Miller, who established a highly productive malaria research laboratory and later succeeded Neva as chief of LPD.

"Frank was brought to NIH to revitalize the Laboratory of Parasitic Diseases and he did just that," said Miller, who currently is a section chief in NIAID's Laboratory of Malaria and Vector Research. "He knew how to bring out the best in his staff and was deeply respected by all of us."

Neva hired many future NIH leaders of tropical disease research, including Drs. Tom Wellems, Tom Nutman, David Sacks, Ted Nash and Alan Sher. In



doing so, he shepherded parasitology research at NIH from a small area of focus to a program that is now spread among four different NIAID laboratory groups and involves approximately 400 NIAID scientific staff at laboratories in Bethesda and abroad.

Neva also established a clinical service for parasitic infections at NIH, which treats patients from developing countries as well as U.S. citizens whose cases are of scientific interest. He mentored many LPD trainees who subsequently rose to leadership positions in universities, government agencies and international health organizations.

"Frank made major contributions to the study of malaria, leishmaniasis, Chagas disease and strongyloidiasis," said Nash, an LPD section chief and Neva's first research fellow. "His great love was clinical parasitology. There was no one better clinically. I most appreciated his integrity, humility and unselfishness—traits he used to make considered decisions for the benefit of his staff."

Among his many honors, Neva was the first member of the American Society of Tropical Medicine and Hygiene to receive its Ben Kean Medal, an award that recognized his dedication to clinical tropical medicine and his impact on the training of students, fellows and practitioners of tropical medicine. He also received the Joseph E. Smadel Lectureship from the Infectious Diseases Society of America and the Presidential Meritorious Executive Rank Award for his exemplary leadership and public service.

Neva was preceded in death by his wife of 59 years and is survived by three children, six grandchildren and two great-grandchildren.

New Members Join NIDA Council

The National Institute on Drug Abuse recently welcomed five new members to its advisory council.

Dr. Linda Mayes is the Arnold Gesell professor of child psychiatry, pediatrics and psychology at the Yale Child Study Center at Yale University School of Medicine. She is also special advisor to the school's dean.

Dr. Nabila El-Bassel is professor at Columbia University School of Social Work and director of the social intervention group. She also directs the Columbia University Global Health Research Center of Central Asia, a team of faculty, scientists, researchers and students in both New York and Central Asia.

Dr. Elizabeth Howell is associate professor of psychiatry (clinical) at the University of Utah School of Medicine. She has an inpatient and outpatient practice at the university's Neuropsychiatric Institute.

Dr. Kirk Thomas is retired commissioner of the department of mental health and addiction services in Hartford, Conn. He is a nationally recognized health care executive with over 30 years of leadership in large public and private substance abuse and mental health care systems.

Dr. Marina Picciotto is the Charles B.G. Murphy professor of psychiatry in the department of psychiatry at Yale University School of Medicine. She is also associate director of the M.D. and Ph.D. program at Yale.



NIDA director Dr. Nora Volkow (fourth from l) welcomes new members of the NIDA council (from l) Dr. Linda Mayes, Dr. Nabila El-Bassel, Dr. Elizabeth Howell, Dr. Kirk Thomas and Dr. Marina Picciotto.



Dr. Darryl Zeldin recently became the new scientific director at NIEHS.

NIEHS Names Zeldin Scientific Director

Dr. Darryl Zeldin became the new scientific director at NIEHS on Oct. 23. He leads a \$114 million biomedical research program focused on discovering how the environment influences human health and disease.

"I can think of no one better suited for this position," said NIEHS/NTP director Dr. Linda Birnbaum. "Darryl is passionate about science, understands the mission of the institute and has extensive laboratory and clinical research experience. He has already proven himself to be a leader by establishing our world-class clinical research program."

Zeldin has served as the institute's acting clinical director since 2007, in addition to leading two research groups within the Laboratory of Respiratory Biology, focusing on both basic and clinical translational research.

Zeldin is trained in internal medicine with a subspecialty in pulmonary and critical care medicine. He has spent most of his career at NIEHS, arriving in 1994 as a tenure-track investigator before being promoted to a tenured senior investigator in 2001. He has served in several leadership roles, including representing his fellow scientists as president of the NIEHS Assembly of Scientists and participating in developing strategic research plans for the division and for NIEHS.

As scientific director, Zeldin will oversee intramural research programs with approximately 950 employees working in 12 different laboratories and branches and 8 core facilities.

"I am both honored and humbled to be selected to lead such an outstanding group of scientists," he said. "I believe the work we do here at NIEHS is pivotal to improving the overall health of our nation. I'm looking forward to building upon our existing research strengths by using emerging technologies and effective scientific collaboration to develop a cutting-edge research program."

Zeldin also said one of his highest priorities will be to recruit and train the next generation of leaders in the field of environmental health sciences. "I will work hard to recruit outstanding tenure-track scientists and to expand our training programs," he said. "The future of our country depends on it."

Zeldin earned a B.A. in chemistry from Boston University in 1982 and an M.D. from Indiana University School of Medicine in 1986. He completed a residency in internal medicine at Duke University in 1989 and a fellowship in pulmonary/critical care medicine at Vanderbilt University in 1993. Zeldin is internationally recognized for his con-

tributions to the fields of environmental health, respiratory disease and cardiovascular disease.

He is a member of the American Society for Clinical Investigation and a fellow in the American College of Chest Physicians and the American Heart Association. He has served on NIH and foundation study sections and is a member of the editorial boards of several scientific journals. He has published more than 200 peer-reviewed articles in leading biomedical journals, as well as numerous reviews and book chapters. Zeldin is on staff at Duke University Medical Center, where he serves as an attending physician on the pulmonary consult service and the medical intensive care unit.



NICHD Scientist Weisberg Mourned

Dr. Robert Weisberg, a scientist at NIH for over 40 years, passed away suddenly on Sept. 1. He was formerly head of the section on microbial genetics in the Laboratory of Molecular Genetics (LMG), NICHD.

Weisberg was among the first scientists who approached the biology of bacteriophage lambda, which later developed into a model system that laid the groundwork for much of our understanding of fundamental principles of gene regulation and DNA recombination. He dissected the mechanism of site-specific recombination that allows the integration of phage DNA into the host chromosome. More recently, he uncovered a novel mechanism of gene regulation via RNA-protein interaction.

"Bob was a brilliant scholar with a deep and abiding interest in science. These were the tools he brought so effectively to bear on biology's most intriguing problems," said Dr. Philip Leder, an eminent geneticist and former chief of LMG. "We were fortunate to have brought him to NIH and we will miss him sorely."

"The keenest joy of scientific research comes when one's guesses prove correct," Weisberg wrote for his Harvard class 20th reunion book. Dr. Igor Dawid, who succeeded Leder as head of LMG, said, "Bob focused his research on what interested him and did not follow fashionable trends." Dawid pointed out that Weisberg did his research at a time when intellectual pursuit was the basis of science; NIH gave him an opportunity to follow his interests and this effort produced important results.

Weisberg was born in Bayonne, N.J., in 1937, and received his A.B. at Harvard in 1958. He liked to recall that it was Nobel laureate Dr. James D. Watson who, to the utter disappointment of Weisberg's mother, diverted him from a medical career into the field of virology. Weisberg received his Ph.D. at the California Institute of Technology, and after a postdoctoral training in Europe, founded his own laboratory at Oak Ridge National Laboratory in Tennessee. He moved to NIH in 1969. Weisberg retired in 2008, but continued to be an active member of the NIH community as scientist emeritus at NCI's Laboratory of Molecular Biology.

Weisberg's vibrant personality, sound judgment, sense of humor, his noble and kind nature made him an unforgettable colleague and mentor. For many years, he organized the Lambda Lunch seminar series, a prokaryotic interest group. Weisberg's long-term colleague at LMG, Dr. Michael Cashel, admired Weisberg's attitude when giving talks: "Bob thought that it was more important to make sure that everybody understood the details than to finish the seminar."

Weisberg was able to find time for his broad interests: grandchildren, pigs, travels, books, concerts, theaters, movies, museums, mushroom hunting, fishing, boating and solving crossword puzzles.

A celebration of Weisberg's work and life will be held on Friday, Nov. 18 in Bldg. 60 at 1:30 p.m., with presentations starting at 2 p.m.—Natalia Komissarova



PHS Team Competes in Army 10-Miler

Members of the Public Health Service 2011 Army 10-Miler team (above), led by NHGRI's Dr. Shelley Hoogstraten-Miller (seated front row, 1) and NINDS's Dr. Evan Shukan (back row, third from 1), assemble after the race. Below, runners Dr. Jason Woo of NICHD and Shukan are cheered on by NCI's Dr. Sean Altekruze (foreground, white shirt) while carrying the PHS flag during the race on Oct. 9. The teams included many NIH'ers but also runners from FDA, CDC, IHS, HRSA and other PHS agencies.



Women's Health Studies Seek Healthy Volunteers

Healthy women ages 45-65 are invited to participate in outpatient research studies. Compensation is provided. Call (301) 496-9576 and refer to protocol 88-M-0131.

Did You Ever Have Postpartum Depression?

If you suffered from postpartum depression (PPD) following the birth of any of your children, consider participating in this 8-month outpatient research study at the Clinical Center. This NIMH research study is designed to examine the role of hormones in the onset of your PPD. To participate, you must be 18-50 years old with regular menstrual cycles and not taking any medications. Call (301) 496-9576 and refer to study 95-M-0097. There is no cost to participate and compensation may be provided.

Study of Neck Pain

Are you a healthy individual with neck pain for 3 months or less? If you are between the ages of 18 and 65, you may be able to participate in a neck pain study and receive a comprehensive cervical musculoskeletal examination. Healthy volunteers are also needed. Email NeckPainStudy@gmail.com or call (301) 451-7514. Refer to study 02-CC-0245.



CFC Annual Halloween Party Draws Crowd

The "Debt Ceiling" (second from 1) and Half Man/Half Woman (fourth from 1) were among guests at the NIH R&W's annual CFC Halloween Party on Oct. 31 on the Bldg. 31A patio. The event included music, CFC charity tables on display and food from various vendors. Prizes were also given away for best character, most creative and scariest costume.

PHOTO: MICHAEL SPENCER

From Bench to Bedside

Device to Help Dysphagia Is Fully Licensed

By Shannon E. Garnett

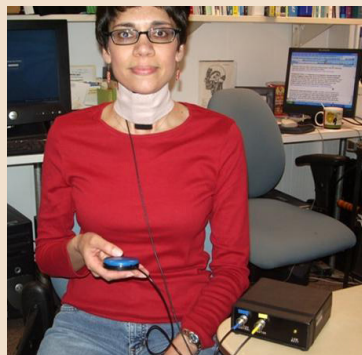
A device developed by the NINDS Intramural Research Division to help people with the swallowing disorder dysphagia has moved one step closer to commercial development. The vibrotactile device—developed in the laryngeal and speech section of the Medical Neurology Branch by then senior scientist Dr. Christy Ludlow—was recently fully licensed by a private company. The company, Passy Muir, will further develop it for eventual commercialization.

“Dr. Ludlow’s device presents extraordinary potential to patients who would otherwise be unable to swallow,” said Laurie Arrants of NINDS’s technology transfer office, which handled developmental tech transfer and licensing activities along with NIH’s Office of Technology Transfer. “Translating such inventive scientific work to a commercial product made available to patients takes a dedicated scientist, a supportive institute, a coordinated team of tech transfer and licensing specialists and a qualified commercial company. We hope that the device can reach the market in 3 to 5 years and the patient/public health benefits of Dr. Ludlow’s work will be fully realized.”

The vibrotactile device was designed to improve swallowing and reduce the risk of choking for people who develop chronic swallowing problems after brain injury such as stroke. While at NINDS, Ludlow—who has been developing the device for 13 years—conducted several studies to perfect it.

One study compared the effects of patients retraining their own swallowing using a vibrotactile device with an implanted muscle stimulator to find which is better at improving swallowing in people with dysphagia. The device is strapped to the outside of the throat near the larynx and provides sensory stimulation when the user tries to swallow. Study participants were randomized to one of the two device groups.

“Overall most patients in both groups reported improvement and were able to increase their food intake even though they had not previously been able to take anything orally for well over a year prior to the study,” said Ludlow, now director of the Laboratory on Neural Bases of Communication and Swallowing at James Madison University. She and her colleagues are still



The vibrotactile device shown above was used in previous NIH studies. A more clinical form that is easy to use is being developed. Dr. Christy Ludlow (r) created the vibrotactile device.

analyzing data from the study and hope to submit the results soon for publishing.

Dysphagia is a common disorder caused by brain damage following stroke, traumatic brain injury or tumor removal and is also seen in people with neurodegenerative disorders such as Parkinson’s disease. People with dysphagia have difficulty swallowing and may experience aspiration, i.e., food or liquid going into the windpipe while swallowing. Some people may be completely unable to swallow or may have trouble swallowing liquids, food or saliva.

According to Ludlow, people at risk of choking on fluid or food for several weeks or months face a significant risk of aspiration pneumonia, are restricted in their intake by mouth and may need to be fed by a tube. The survival rate in some of these cases is estimated to be only 17 percent after 3 years. The purpose of the vibrotactile device is to increase survival and quality of life by reducing risk of aspiration and improving swallowing function.

Because the device used in previous NIH studies was a research device, Ludlow says, “a more clinical form of the device that is easy for patients to use needs to be developed.” The next step is to evaluate a more user-friendly version and then test it with patients and speech pathologists.

Since leaving NIH and assuming the JMU post, Ludlow has received an NINDS grant to develop a valid and reliable diagnostic test for spasmodic dysphonia. Spasmodic dysphonia is a neurological disorder affecting the brain control of voice muscles in the larynx, or voice box. Many people go undiagnosed for several years and may undergo unnecessary procedures because they do not have an early, accurate diagnosis, Ludlow noted.

“We hope that this new diagnostic and assessment procedure will provide methods to enhance early treatment and research on this poorly understood disorder,” she said. ☐

NINDS Receives Ethics Award

NINDS recently received the 2011 Program Excellence and Innovation Award at the 18th National Government Ethics Conference in Orlando. Sponsored by the Office of Government Ethics (OGE), the award recognizes executive branch agencies that demonstrate ethics program success. Shown at right, NINDS ethics specialists Ayo Larmie (l) and Christine Galvin-Combet (r) were on hand to accept the award from Don Fox, acting OGE director.



Recipients have a strong commitment to excellence in ethics program management, employ innovative approaches to educate federal employees on the Standards of Ethical Conduct, use model practices to encourage understanding and awareness of ethical behaviors and create a stronger ethical culture as a result of these efforts. In addition to NINDS, three other NIH institutes—NINR, NIMH and NIEHS—were recognized for program excellence and innovation. Themed “Organizational Integrity: A Shared Responsibility,” the conference featured dozens of informative, interactive sessions presented by speakers including Holli Beckerman Jaffe, senior policy officer in the NIH Ethics Office, and Gretchen Weaver, senior NIH ethics counsel in the Office of General Counsel.